Proceedings of the Indian Academy of Sciences
Mathematical Sciences

Volume 105
1995

Published by the Indian Academy of Sciences
Bangalore 560 080

Proceedings of the Indian Academy of Sciences

(Mathematical Sciences)

Editor

S G Dani
Tata Institute of Fundamental Research, Bombay

Editorial Board

S S Abhyankar, *Purdue University, West Lafayette, USA*
Gopal Prasad, *University of Michigan, Ann Arbor, USA*
K R Parthasarathy, *Indian Statistical Institute, New Delhi*
Phoolan Prasad, *Indian Institute of Science, Bangalore*
M S Raghunathan, *Tata Institute of Fundamental Research, Bombay*
S Ramanan, *Tata Institute of Fundamental Research, Bombay*
C S Seshadri, *SPIC Science Foundation, Madras*
V S Varadarajan, *University of California, Los Angeles, USA*
S R S Varadhan, *Courant Institute of Mathematical Sciences, New York, USA*
K S Yajnik, *C-MMACS, NAL, Bangalore*

Editor of Publications of the Academy

V K Gaur
C-MMACS, NAL, Bangalore

Subscription Rates – 1996

All countries except India..... $100

(Price includes AIR MAIL charges)

India..... Rs 150

Annual subscriptions are available for **Individuals** for India and abroad at the concessional rates of Rs. 75/- and $30 respectively.

All correspondence regarding subscription should be addressed to **The Circulation Department** of the Academy.

Editorial Office:

Indian Academy of Sciences, C V Raman Avenue,
P B No. 8005, Bangalore 560 080, India

Telephone: 334 2546
Telex: 0845-2178 ACAD IN
Telefax: 91-80-334 6094

© 1995 by the Indian Academy of Sciences. All rights reserved.

The "Notes on the preparation of papers" are printed in the last issue of every volume.

Proceedings of the Indian Academy of Sciences

Mathematical Sciences

Volume 105, 1995

VOLUME CONTENTS

Number 1, February 1995

The structure of generic subintegrality.....*Les Reid, Leslie G Roberts and Balwant Singh* 1

Flat connections, geometric invariants and energy of harmonic functions on compact Riemann surfaces.....*K Guruprasad* 23

Fibred Frobenius theorem.....*Pedro M Gadea and J Muñoz Masqué* 31

On infinitesimal h-conformal motions of Finsler metric.....*H G Nagaraja, C S Bagewadi and H Izumi* 33

A bibasic hypergeometric transformation associated with combinatorial identities of the Rogers–Ramanujan type.....*U B Singh* 41

Some theorems on the general summability methods.....*W T Sulaiman* 53

Symmetrizing a Hessenberg matrix: Designs for VLSI parallel processor arrays.....*F R K Kumar and S K Sen* 59

Control of interconnected nonlinear delay differential equations in $W_2^{(1)}$.....*E N Chukwu* 73

A note on integrable solutions of Hammerstein integral equations.....*K Balachandran and S Ilamaran* 99

On over-reflection of acoustic-gravity waves incident upon a magnetic shear layer in a compressible fluid.....*P Kandaswamy* 105

Number 2, May 1995

Badly approximable p-adic integers.....*A G Abercrombie* 123

Uncertainty principles on certain Lie groups.....*A Sitaram, M Sundari and S Thangavelu* 135

On subsemigroups of semisimple Lie groups.....*D Kelly-Lyth and M McCrudden* 153

Induced representation and Frobenius reciprocity for compact quantum groups.....*Arupkumar Pal* 157

Differential subordination and Bazilevič functions.....*S Ponnusamy* 169

Convolution integral equations involving a general class of polynomials and the multivariable H-function
K C Gupta, Rashmi Jain and Pawan Agrawal 187

On L^1-convergence of modified complex trigonometric sums
Satvinder Singh Bhatia and Babu Ram 193

Absolute summability of infinite series
C Orhan and M A Sarigöl 201

Solution of a system of nonstrictly hyperbolic conservation laws
K T Joseph and G D Veerappa Gowda 207

Oscillation in odd-order neutral delay differential equations
Pitambar Das 219

Surface waves due to blasts on and above inviscid liquids of finite depth
C R Mondal 227

Generation and propagation of SH-type waves due to stress discontinuity in a linear viscoelastic layered medium
P C Pal and Lalan Kumar 241

A proof of Howard's conjecture in homogeneous parallel shear flows – II: Limitations of Fjortoft's necessary instability criterion
Mihir B Banerjee, R G Shandil and Vinay Kanwar 251

Number 3, August 1995

Lifting orthogonal representations to spin groups and local root numbers
Dipendra Prasad and Dinakar Ramakrishnan 259

Irrationality of linear combinations of eigenvectors
Anthony Manning 269

On the zeros of $\zeta_{(s)}^{(l)} - a$ (on the zeros of a class of a generalized Dirichlet series-XVII)
K Ramachandra 273

A note on the growth of topological Sidon sets
K Gowri Navada 281

Characterization of polynomials and divided difference
P L Kannappan and P K Sahoo 287

A theorem concerning a product of a general class of polynomials and the H-function of several complex variables
V B L Chaurasia and Rajendra Pal Sharma 291

Certain bilateral generating relations for generalized hypergeometric functions
Maya Lahiri and Bavanari Satyanarayana 297

A localization theorem for Laguerre expansions
P K Rathnakumar 303

Degree of approximation of functions in the Hölder metric by (e, c) means
G Das, Tulika Ghosh and B K Ray 315

The algebra $A_p((0,\infty))$ and its multipliers.....
.....*Ajit Iqbal Singh and H L Vasudeva* 329

Reflection of P-waves in a prestressed dissipative layered crust.....
.....*Sujit Bose and Dipasree Dutta* 341

Computer extended series solution to viscous flow between rotating discs
.....*N M Bujurke, N P Pai and P K Achar* 353

Number 4, November 1995

The Hodge conjecture for certain moduli varieties.....*V Balaji* 371

Equivariant cobordism of Grassmann and flag manifolds.....
.....*Goutam Mukherjee* 381

Local behaviour of the first derivative of a deficient cubic spline interpolator
.....*Surendra Singh Rana* 393

On the partial sums, Cesáro and de la Valeé Poussin means of convex and starlike functions of order 1/2.....*Ram Singh and Sukhjit Singh* 399

Uniqueness of the uniform norm and adjoining identity in Banach algebras
.....*S J Bhatt and H V Dedania* 405

Weakly prime sets for function spaces.....
.....*H S Mehta, R D Mehta and B B Mishra* 411

Oscillation of higher order delay differential equations.....
.....*P Das and N Misra* 417

Nontrivial solution of a quasilinear elliptic equation with critical growth in $\mathbb{R}^n$.....*Ratikanta Panda* 425

An axisymmetric steady-state thermoelastic problem of an external circular crack in an isotropic thick plate.....
.....*Rina Bhowmick and Bikash Ranjan Das* 445

Some characterization theorems in rotatory magneto thermohaline convection.....*Joginder Singh Dhiman* 461

Subject Index..... 471

Author Index..... 476